

Inventor: William D. Huse
Serial No.: 08/471,622
Filed: June 5, 1995
Page 6

said first and second DNA sequences contained in vectors, one or both of said polypeptides being expressed as a fusion protein with the protein product of gene VIII of a filamentous bacteriophage.

16. (Amended) A cloning system for the coexpression of two or more DNA sequences encoding polypeptides which form a heteromeric receptor functional in the absence of a heteromeric receptor membrane attachment domain, comprising a set of first vectors having a diverse population of first DNA sequences and a set of second vectors having a diverse population of second DNA sequences, said first and second vectors having two pairs of restriction sites symmetrically oriented about a cloning site for containing said first and second populations of DNA sequences, said two pairs of restriction sites in an opposite orientation with respect to the cloning site on each vector, sequences between said first pair of restriction sites in said two vectors being homologous enough to allow annealing, and sequences between said second pair of restriction sites in said two vectors being homologous enough to allow annealing, so as to allow only the operational combination of vector sequences containing said first and second DNA sequences.

26. (Amended) A plurality of expression vectors, each vector containing a first and second DNA sequence encoding a first and second polypeptide of a heteromeric receptor, which form a plurality of heteromeric receptors functional in the absence of a heteromeric receptor membrane attachment domain, one or more of said receptors exhibiting binding activity toward a

Inventor: William D. Huse
Serial No.: 08/471,622
Filed: June 5, 1995
Page 7

preselected molecule, said first or second DNA sequence being operatively linked to gene VIII of a filamentous bacteriophage.

66. (Amended) A vector comprising two copies of a gene encoding a filamentous bacteriophage coat protein, one copy of said gene being operationally linked to a DNA sequence encoding a polypeptide of a heteromeric receptor functional in the absence of a heteromeric receptor membrane attachment domain, said DNA sequence being expressed as a polypeptide of a fusion protein comprising said heteromeric receptor on the surface of said filamentous bacteriophage or as a soluble polypeptide.

70. (Amended) The vector of claim 66, wherein said vector has substantially the same sequence as that shown in Figure 2 (SEQ ID NO: 1) and wherein said two copies of said encoded filamentous bacteriophage coat protein and said encoded fusion protein have the same function as that shown in Figure 2 (SEQ ID NO: 1).

71. (Amended) A vector comprising sequences necessary for the coexpression of two or more inserted DNA sequences encoding polypeptides which form heteromeric receptors functional in the absence of a heteromeric receptor membrane attachment domain and two copies of a gene encoding a filamentous bacteriophage coat protein, one copy of said gene being operationally linked to one of said two or more inserted DNA sequences, said DNA sequence being expressed as a polypeptide of a fusion protein comprising said heteromeric receptor on the